



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

NOTICE OF ALLOWANCE AND ISSUE FEE DUE

IM12/1004

GENERAL ELECTRIC COMPANY  
CRD PATENT DOCKET RM 4A59  
BLDG K 1 SALAMONE  
PO BOX 8  
SCHENECTADY NY 12301

| APPLICATION NO.       | FILING DATE | TOTAL CLAIMS              | EXAMINER AND GROUP ART UNIT | DATE MAILED   |
|-----------------------|-------------|---------------------------|-----------------------------|---------------|
| 09/370,135            | 08/09/99    | 037                       | ZIMMER, M                   | 1712 09/05/01 |
| First Named Applicant | SIVAVEC,    | 35 USC 154(b) term ext. = | 0 Days.                     |               |

TITLE OF INVENTION POLYMER COATINGS FOR CHEMICAL SENSORS

| ATTY'S DOCKET NO. | CLASS-SUBCLASS | BATCH NO. | APPLN. TYPE | SMALL ENTITY | FEE DUE   | DATE DUE |
|-------------------|----------------|-----------|-------------|--------------|-----------|----------|
| 1 RD-26.328       | 073-024.010    | L48       | UTILITY     | NO           | \$1240.00 | 12/05/01 |

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.**

**THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.**

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III. All communications regarding this application must give application number and batch number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

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NOTICE OF ALLOWANCE AND ISSUE FEE DUE

IM22/0905

GENERAL ELECTRIC COMPANY  
ORD PATENT DOCKET RM 4A59  
BLDG K 1 SALAMONE  
PO BOX 8  
SCHENECTADY NY 12301

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# Notice of Allowability

Application No.

09/370,135

Examiner

Marc S. Zimmer

Applicant(s)

SIVAVEC ET AL.

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## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 08/02/01.
2. ☒ The allowed claim(s) is/are 1-17 and 33-52.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☒ CORRECTED DRAWINGS must be submitted.
  - (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☒ hereto or 2) ☐ to Paper No. \_\_\_\_\_.
  - (b) ☐ including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
  - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the top margin (not the back) of each sheet. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

- |  |   |
|--|---|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892)  | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)          |
| 3 <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 4 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____             |
| 5 <input type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. _____               | 6 <input type="checkbox"/> Examiner's Amendment/Comment                             |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
|  | 9 <input type="checkbox"/> Other  |

***Allowable Subject Matter***

In his previous Office action, the Examiner maintained the rejection over claims 1-3, 5-6, 13, 33-35, 37-38, 45, and 50-52 over McGill in view of Litwin on the grounds that the Applicants had not explicitly mandated that the absorbent polymer be applied directly on a surface of the sensor element. Rather, in the absence of any revelation to the contrary, it was presumed that the film could be "disposed on" said element either directly or subsequent to the application of an intervening layer. In response, the Applicants have further delineated their invention by stating that the sorbent layer is coated directly onto the piezoelectric crystal according to the matching disclosure provided on page 6, lines 5-7 of the Specification. While the Examiner disagrees with the Applicant's assertion that this recitation categorically excludes all obvious variants, the language is acceptable insofar as the record has been clarified as to the precise meaning of this passage. That is, it is presently apparent that the Applicants are claiming only those sensors featuring copolymer materials containing both hard- and soft blocks for which the polymer is coated directly onto a surface of the sensor element/substrate, e.g. a quartz crystal, and that there can be no intervening layer separating the sorbent and substrate. McGill does not contemplate a sensor that mirrors this particular configuration hence claims 1-17 and 33-52 are allowed.

It is important to note that while the Examiner agrees with the Applicant's contention that the aforementioned aspect of the instant invention is not disclosed by the McGill reference, the premise that it and the Litwin reference are in direct conflict with respect to the suitability of using a non-polar sorbent material is inaccurate. As

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evidence to support their position, the Applicants highlight the disclosure offered in column 5, lines 26-38 of '552. However, it is inappropriate to isolate this passage for discussion as it is easily taken out of context if the remainder of the document is ignored. As the Examiner pointed out in page 8 of paper no. 4, the underlying theme of the McGill reference is that it is necessary to dispose an intermediate diamond-like carbon layer between the chemoselective sorbent and the quartz substrate to preclude the accumulation of moisture on the sensor. There is nothing in the reference that would indicate that this phenomenon is limited only to those devices containing a non-polar hydrocarbon sorbent. In essence, the recitation of a non-polar coating that detects hydrocarbon analytes is offered only as *one example* of a sensor configuration that may be deleteriously affected by the presence of moisture. Indeed, McGill identifies non-polar polyalkylenes as one of a list of *preferred* chemoselective materials in column 7, lines 4 and 5.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 703-605-1176. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson can be reached on 703-308-2340. The fax phone numbers

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for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Marc S. Zimmer  
AU 1712

September 3, 2001

A handwritten signature in black ink, appearing to read 'R.E.L. Sellers', written in a cursive style.

ROBERT E.L. SELLERS  
PRIMARY EXAMINER